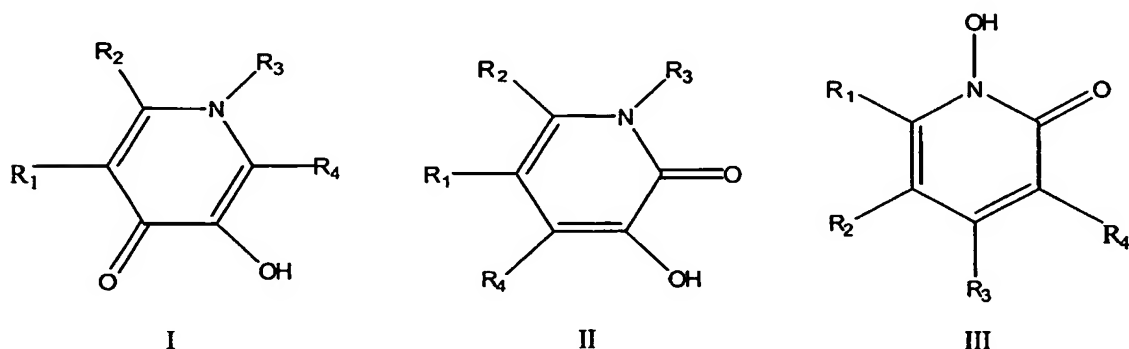**WHAT IS CLAIMED:**

   1.   A method of inhibiting 4-hydroxyphenylpyruvate dioxygenase in a living system comprising:

5   administering to the living system an effective amount of a compound of formulas I or II or III or derivatives thereof as follows:
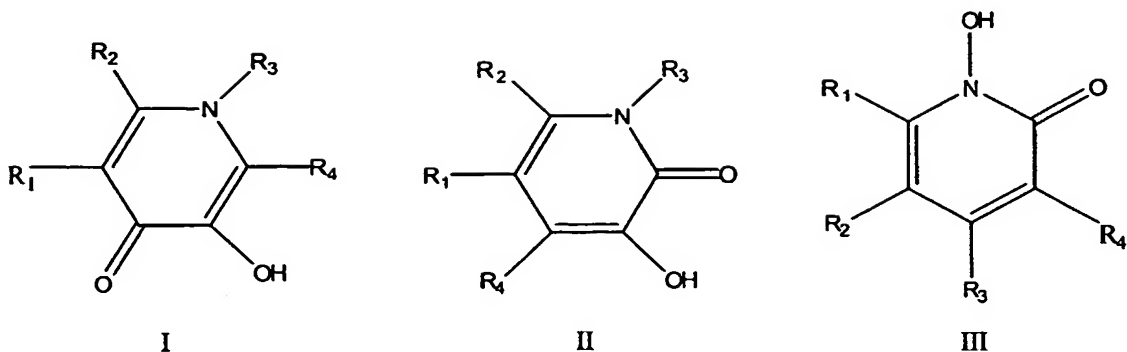

   I   II   III

R^1, R^2, R^3, and R^4 each individually represent a hydrogen, an alkyl, alkenyl, or alkoxy

10   group containing 1 to about 8 carbon atoms, an aryl, aralkyl, or cycloalkyl group containing about 5 to 12 carbon atoms, or a carboalkoxy or carbamyl group containing up to 8 carbon atoms, or a peptide or peptidomimetic moiety containing 10 to about 30 carbon atoms.

15   2.   A method according to claim 1, wherein the compound is deferiprone (DMHP).

   3.   A method of treating a patient with tyrosinemia comprising:
         administering to the patient an effective amount of a compound of

20   formulas I or II or III or derivatives thereof as follows:
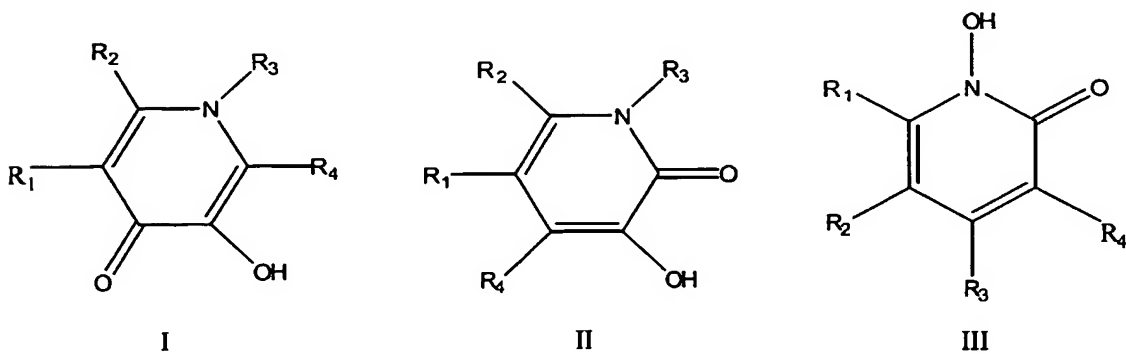
I   II   III

R^1, R^2, R^3, and R^4 each individually represent a hydrogen, an alkyl, alkenyl, or alkoxy group containing 1 to about 8 carbon atoms, an aryl, aralkyl, or cycloalkyl group containing about 5 to 12 carbon atoms, or a carboalkoxy or carbamyl group containing up to 8 carbon atoms, or a peptide or peptidomimetic moiety containing 10 to about 30 carbon atoms.

4.   A method according to claim 3, wherein the compound is deferiprone (DMHP).

5.   A method of regulating plant growth comprising:

administering to a plant an effective amount of a compound of formulas I or II or III or derivatives thereof as follows:

I   II   III

R^1, R^2, R^3, and R^4 each individually represent a hydrogen, an alkyl, alkenyl, or alkoxy group containing 1 to about 8 carbon atoms, an aryl, aralkyl, or cycloalkyl group containing about 5 to 12 carbon atoms, or a carboalkoxy or carbamyl group containing up to 8 carbon atoms, or a peptide or peptidomimetic moiety containing 10 to about 30 carbon atoms.

6.   A method according to claim 5, wherein the compound is
deferiprone (DMHP).

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